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EXAMINER

NGUYEN, TOAN D

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,649

Applicant(s)

ROBERT T. BAUM ET AL.

Examiner

Toan D Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-24 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 9, 12-17, 25, 31, 33-40, 42, 43 and 45 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 10, 11, 26-30, 32, 41 and 44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-3, 6, 12-13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (U.S. Patent 6,266,395 B1) in view of Miller et al. (U.S. Patent 5,920,701)

For claims 1-2, 6, 12 and 16, Liu et al. disclose single-ended subscriber loop qualification for XDSL service, comprising the steps:

determining unused bandwidth on a common link of an access data network carrying subscriber traffic and over which central content server and the at least one local content server communicate; and transmitting content data stored on the central content server to the at least

one local content server substantially on the determined unused bandwidth (figure 1, col. 2 lines 48-56 and col. 4 lines 35-39). Liu et al. do not disclose one local content server communicate. In an analogous art, Miller et al. disclose at least one local content server communicate (figure 1, col. 5 lines 22-26). One skilled in the art would have recognized local content server to use teaching of Miller et al. in the system of Liu et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the local content server as taught by Miller et al. in Liu et al.'s system with the motivation being to obtain content data locally quickly (col. 5 lines 23-25).

For claims 3, Liu et al. disclose the vertical services domain is located in a central office that provided Digital Subscriber Line (DSL) service to the at least one end user terminal (figure 1, col. 2 lines 48-51).

For claim 13, Miller et al. in view of Liu et al. disclose the steps of determining unused bandwidth and transmitting content data utilize priority and queuing in at least one node of the access data network, to implement a minimum bandwidth and provide additional bandwidth as available on the common link, for the transmitting of the content data over the common link (figure 4, col. 6 line 62 to col. 7 line 56).

3. Claims 5, 14-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (U.S. Patent 6,266,395 B1) in view of Miller et al. (U.S. Patent 5,920,701) further in view of Sistanizadeh et al (U.S. Patent 5,790,548).

For claim 5, Liu et al. in view of Miller et al. do not disclose the central content server is located in a hub site. In an analogous art, Sistanizadeh et al. disclose the central content server is located in a hub site (col. 16 lines 8-16). One skilled in the art would have recognized a hub to

use teaching of Sistanizadeh et al. in the system of Liu et al. Therefore, it would have been obvious to one ordinary skill in the art at the time invention, to use the hub as taught by Sistanizadeh et al. in Liu et al.'s system with the motivation being to provide an interoffice single mode optical fiber transport link support 10BaseT Ethernet transport (col. 16 lines 8-11).

For claims 14-15, Sistanizadeh et al. disclose a congestion mechanism comprises Transmission Control Protocol (TCP) (col. 16 lines 15-16).

For claim 17, Sistanizadeh et al. disclose the common link of the network also carries logical circuits for wide area data communications of a plurality end user terminals (figure 4, col. 6 lines 6-8).

4. Claim 9, 25, 31, 33-40, 42-43 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (U.S. Patent 6,266,395 B1) in view of Miller et al. (U.S. Patent 5,920,701) and Sistanizadeh et al. (U.S. Patent 5,790,548) further in view of Araujo et al (U.S. Patent 6,118,785).

For claim 9, Sistanizadeh et al in view of Liu et al. and Mileer et al. disclose universal access multimedia data network, comprising the step of:

provisioning a logical communication circuit extending from the at least one end user terminal through the network to a communication access node coupled to a first network domain, at least a portion of the logical communication circuit extending through the common link, wherein the provisioning comprises defining the logical communication circuit in terms of a layer-2 protocol defining switched connectivity through the network (figure 3, col. 5 lines 50-52, and col. 7 lines 45-47);

forwarding each detected transmission of a second type, different from the first transmission type, to a second network domain logically separate from the first network domain, wherein the at least one second server is coupled to the second network domain to receive at least one transmission of a second type for control of the step of transmitting the content data stored on the at least one second server to at least one end user terminal proximate to the at least one second server (col. 7 lines 39-42).

However, Sistanizadeh et al. in view of Liu et al. and Miller et al. do not disclose at the data switch, examining communicated information in transmission from the customer premises, for a protocol encapsulated within said layer-2 protocol, to distinguish transmission types; and forwarding each detected transmission of a first transmission type from the data switch to the communication access node over the logical communication circuit defined in term of the layer-2 protocol. In an analogous art, Araujo et al. disclose at the data switch, examining communicated information in transmission from the customer premises, for a protocol encapsulated within said layer-2 protocol, to distinguish transmission types (figure 6, col. 9 lines 28-29); and forwarding each detected transmission of a first transmission type from the data switch to the communication access node over the logical communication circuit defined in term of the layer-2 protocol (col. 9 lines 18-27). One skilled in the art would have recognized the data switch to use teaching of Araujo et al. in the system of Liu et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the data switch as taught by Araujo et al. in Liu et al.'s with the motivation being to provide a minimal encapsulation for PPP data packets sent between two L2TP endpoints (figure 6, col. 9 lines 28-34).

For claims 25, 39 and 45, Sistanizadeh et al. in view of Liu et al. and Miller et al. disclose universal access multimedia data network, comprising:

- a communication access node coupled to a first network domain (figure 3, col. 5 lines 50-52);

- a central content server for storing content data coupled to the communication access node (col. 8 lines 8-14);

- a plurality of digital subscriber line transceivers coupled to network ends of subscribers lines, for data communication with transceivers coupled to customer premises ends of respective subscriber lines (col. 5 lines 38-43);

- an access switch coupled for data communication with the digital subscriber line transceivers, for receiving data from customer premises equipment via respective ones of the digital subscriber line transceivers and for supplying data intended for transmission to predetermined customer premises equipment to the respective ones of the digital subscriber line transceivers (figure 4, col. 6 lines 4-8);

- a high-speed data link between the access switch and the communication node (col. 7 lines 21-23);

- a layer-2 protocol logical communication circuit provisioned through the access switch and the high-speed data link for each subscriber line, wherein each logical communication circuit is provisioned to extend from a respective customer premises to the communication access node (col. 7 lines 45-47);

- a second network domain coupled locally to the access switch (figure 4B, col. 7 lines 1-3);

a local content server for storing content data coupled to the second network domain (col. 7 lines 1-10). In claim 39, Sistanizadeh et al. disclose further a vertical services coupled locally to the access switch (figure 14, col. 17 lines 26-38) and network hub data switch connected to a coupling to the wide area internetwork (figure 14, col. 18 lines 9-25).

However, Sistanizadeh et al. in view of Liu et al. and Miller et al. do not disclose a logical communication circuit for content distribution between the central content server and the local content server provisioned through the access switch and the high-speed data link, the provisioning of the logical communication circuit for content distribution enabling communication of content data between the communication access node and the access switch over bandwidth unused by traffic on the layer-2 protocol logical communication circuits. In an analogous art, Araujo et al. disclose the provisioning of the logical communication circuit for content distribution enabling communication of content data between the communication access node and the access switch on the layer-2 protocol logical communication circuits (col. 9 lines 18-27), and over bandwidth unused by traffic as taught by Liu et al. (figure 1, col. 2 lines 48-56 and col. 4 lines 35-39). Araujo et al. further disclose in claim 39, a multiplexer providing data communications coupling between the ATUs and the access switch (figure 1, col. 6 lines 28-30). One skilled in the art would have recognized the logical communication circuit to use teaching of Araujo et al. in the system of Liu et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the logical communication circuit as taught by Araujo et al. in Liu et al.'s with the motivation being to provide LCP negotiation automatically is used upon the encapsulation format options (col. 15 lines 61-65).

For claim 31, Sistanizadeh et al. disclose a router (col. 5 line 49).

For claim 33, Sistanizadeh et al. disclose a virtual circuit (figure 11, col. 19 lines 48-53).

For claim 34, Sistanizadeh et al. disclose an Asynchronous Transfer Mode (ATM) switch (col. 20 lines 14-19).

For claim 35, Sistanizadeh et al. disclose the digital subscriber line transceivers comprise asymmetrical digital subscriber line (ADSL) terminal units (ATUs) (figure 4A, col. 7 lines 13-20); and Araujo et al. in view of Sistanizadeh et al. disclose a multiplexer providing data communications coupling between the ATUs and the access switch (figure 1, col. 6 lines 28-30).

For claims 36-38, Sistanizadeh et al. disclose at least one of the digital subscriber line transceivers is adapted for communication over an optical link (see figure 3).

For claim 40, Sistanizadeh et al. disclose an Asynchronous Transfer Mode (ATM) permanent virtual circuit (col. 20 lines 14-19).

For claims 42-43, Miller et al. in view of Liu et al. and Sistanizadeh et al. disclose the access switch and the hub data switch defines a priority for the transport of content data, and also implements a minimum guaranteed bandwidth for the logical circuit within the high-speed data link (figure 4, col. 6 line 62 to col. 7 line 56).

5. Claim 18-24 are allowed.

Reasons For Allowance

6. The following is an examiner's statement of reasons for allowance:

Regarding to claim 18, the prior art fails to teach a combination of the steps of:

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programming code, carried by the at least one machine readable medium, for execution by at least one computer, wherein the programming code comprises:

a congestion mechanism for determining unused bandwidth on a portion of a common link of an access data network, carrying subscriber traffic and over which the first server and the at least one second server communicate; and

a first transmitting mechanism for causing transmission of content data stored on the first server to the at least one second server substantially on the determined unused bandwidth, in the specific combination as recite in claim 18.

Objection To Claims, Allowable Subject Matter

7. Claims 7-8, 10-11, 26-30, 32, 41 and 44 are objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

Response To Arguments

8. Applicant's arguments filed on February 07, 2002 have been fully considered, but are moot in view of new ground(s) of rejection.

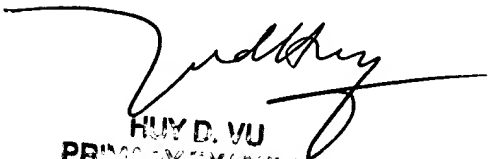
Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 703-305-0140. The examiner can normally be reached on Monday- Friday (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 703-308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

TN
T.N.



HUY D. VU
PRIMARY EXAMINER